

WHAT IS CLAIMED IS:

1. A push-in interbody spinal fusion implant for at least in part linear insertion across the height of a surgically corrected disc space between two adjacent vertebral bodies of a spine, said implant comprising:
 - an upper member having a portion being at least in part arcuate adapted for placement toward and at least in part within one of the adjacent vertebral bodies, said upper member having at least one opening therethrough and in contact with one of the adjacent vertebral bodies, said upper member having a proximal end and a distal end;
 - a lower member having a portion being at least in part arcuate adapted for placement toward and at least in part within the other of the adjacent vertebral bodies, said lower member having at least one opening therethrough and in contact with the other of the adjacent vertebral bodies, said openings of said upper and lower members being in communication with one another and adapted for permitting for the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant and being sufficiently sized and located to allow for interbody spinal fusion through said implant, said lower member having a proximal end and a distal end corresponding to said proximal end and said distal end of said upper member, respectively, and a length between said proximal and distal ends, said upper and lower members articulating therebetween adjacent one of said proximal ends and said distal ends of said upper and lower members and allowing for expansion of the height of said implant, said upper and lower members having a first position relative to one another allowing for a collapsed implant height and a second position relative to one another allowing for an increased height of at least a portion of said implant, said arcuate portions of said upper and lower members in the first position being angled to one another over a substantial portion of the length of said implant and forming at least a portion of one of a frusto-conical shape and the shape

of a cylinder split along a horizontal plane through its mid-longitudinal axis with said upper member and said lower member being angled to each other along the length of said implant;

at least a portion of a bone-engaging projection adapted for linear insertion is formed on the exterior of each of said opposed arcuate portions of said upper and lower members for penetrably engaging the adjacent vertebral bodies and to facilitate securing said implant into the spine; and

a blocker pivotally attached to one of said upper and lower members proximate one of said proximal and distal ends and being adapted to pivot into cooperative engagement with another of said one of said upper and lower members, said blocker being adapted to hold at least a portion of said upper and lower members apart so as to maintain the increased height of said implant and resist the collapse of said implant to the collapsed implant height when said implant is in a final deployed position.

2. The push-in implant of claim 1, further comprising a hollow defined between said upper and lower members in communication with said openings in each of said upper and lower members, said hollow being adapted to receive fusion-promoting substances.
3. The push-in implant of claim 2, wherein said hollow has a width that is unobstructed by any mechanism for moving said blocker.
4. The push-in implant of claim 2, wherein said implant has a constant width in both the collapsed height and the increased height.
5. The push-in implant of claim 2, wherein said blocker is located at least in part between said upper and lower members.
6. The push-in implant of claim 2, wherein said implant as a width and said blocker has a width less than the width of said implant.
7. The push-in implant of claim 2, wherein said blocker is a portion of one of said ends of said upper and lower members.
8. The push-in implant of claim 2, wherein said blocker is adapted to cooperatively engage a tool used to move said blocker from an initial position to a final position to increase the height of said implant, said tool not being a

part of said implant and being removed from said implant after moving said blocker into the final position.

9. The push-in implant of claim 2, wherein said blocker has a width less than one half the width of said implant.
10. The push-in implant of claim 2, wherein said implant has side walls and said blocker does not contact said side walls when said implant is in the final deployed position.
11. The push-in implant of claim 2, wherein said blocker moves said arcuate portions of said upper and lower members from a first angled orientation to a second angled orientation relative to one another.
12. The push-in implant of claim 2, wherein at least one of said upper and lower members is configured to cooperate with a projection so as to stop said upper and lower members from being moved apart from one another more than a predetermined distance.
13. The push-in implant of claim 2, wherein said upper and lower members are configured to cooperate with one another so as to stop said upper and lower members from being moved apart from one another more than a predetermined distance.
14. The push-in implant of claim 2, wherein said upper and lower members have walls contacting one another.
15. The push-in implant of claim 14, wherein said walls are aligned parallel with the longitudinal axis of said implant.
16. The push-in implant of claim 14, wherein said walls are at least in part overlapping.
17. The push-in implant of claim 2, wherein said upper and lower members have a rotational articulation therebetween adjacent one of said proximal end and said distal end of said upper and lower members.
18. The push-in implant of claim 17, wherein said rotational articulation is at one of said proximal end and said distal end of said upper and lower members opposite said blocker.

19. The push-in implant of claim 17, wherein said rotational articulation allows for expansion.
20. The push-in implant of claim 19, wherein said rotational articulation allows for limited expansion.
21. The push-in implant of claim 17, wherein said rotational articulation is formed by said upper and lower members interdigitating so as to cooperatively engage.
22. The push-in implant of claim 21, wherein said rotational articulation is configured such that engagement occurs when said upper and lower members are substantially perpendicular to one another.
23. The push-in implant of claim 22, wherein said rotational articulation is configured to remain engaged within a range of movement of said upper and lower members resulting from positioning said implant in the second position.
24. The push-in implant of claim 2, wherein one of said upper and lower members has an interior wall, which is unexposed, extending therefrom toward the other of said upper and lower members when said implant is in an initial insertion position, and when said implant is in a final position said implant has a shape such that each of said arcuate portions of said upper and lower members are separated by at least a portion of said interior wall, which now has an exposed side.
25. The push-in implant of claim 24, wherein said upper and lower members have side walls for engaging each other.
26. The push-in implant of claim 25, wherein said side walls of said upper and lower members are at least partially overlapping walls.
27. The push-in implant of claim 24, wherein said arcuate portions of said upper and lower members form an angular orientation relative to one another when said implant is in the final position.
28. The push-in implant of claim 24, wherein said arcuate portions of said upper and lower members when said implant is in the final position form one of a frusto-conical shape and the shape of a cylinder split along a horizontal plane

through its mid-longitudinal axis with said upper member and said lower member being angled to each other.

29. The push-in implant of claim 2, wherein said implant has an interior, at least one of said upper and lower members has a screw hole passing therethrough adapted to receive a screw passing from said interior of said implant into one of the adjacent vertebral bodies.
30. The push-in implant of claim 29, wherein each of said upper and lower members has at least one screw hole passing therethrough adapted to receive a screw passing from said interior of said implant into the adjacent vertebral body in contact with each of said upper and lower members respectively.
31. The push-in implant of claim 29, further comprising at least one screw adapted to pass from said interior of said implant through said screw hole and into the adjacent vertebral body to anchor said implant to the adjacent vertebral body.
32. The push-in implant of claim 2, wherein said implant has a side surface when in a final position that is contoured to cooperate with another implant.
33. The push-in implant of claim 32, wherein said implant and said cooperating other implant have a combined width therebetween less than the combined height of said implant and said cooperating other implant.
34. The push-in implant of claim 2, further comprising a cap for closing one of said proximal end and said distal end of said upper and lower members, said cap having an exterior surface and an interior surface.
35. The push-in implant of claim 34, wherein said interior surface of said cap has spaced slots about its circumference to facilitate a snap fit of said cap into said implant.
36. The push-in implant of claim 2, wherein said implant comprises an artificial material other than bone.
37. The push-in implant of claim 2, wherein said implant is made of an artificial material that is stronger than bone.

38. The push-in implant of claim 2, wherein said implant is made of an artificial material that is harder than bone.
39. The push-in implant of claim 2, wherein said implant comprises bone.
40. The push-in implant of claim 39, wherein said bone includes cortical bone. .
41. The push-in implant of claim 2, wherein said implant comprises bone growth promoting material.
42. The push-in implant of claim 41, wherein said bone growth promoting material is selected from one of bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.
43. The push-in implant of claim 2, wherein said implant is treated with a bone growth promoting substance.
44. The push-in implant of claim 2, wherein said implant is a source of osteogenesis.
45. The push-in implant of claim 2, wherein said implant is at least in part bioabsorbable.
46. The push-in implant of claim 2, wherein said implant comprises metal.
47. The push-in implant of claim 46, wherein said metal is ASTM material suitable for use in said push-in spinal fusion implant.
48. The push-in implant of claim 46, wherein said metal includes titanium.
49. The push-in implant of claim 2, wherein said implant comprises a plastic material.
50. The push-in implant of claim 2, wherein said implant comprises a ceramic material.
51. The push-in implant of claim 2, wherein said implant is formed of a porous material.
52. The push-in implant of claim 2, wherein said implant is formed of a material that intrinsically participates in the growth of bone from adjacent vertebral body to adjacent vertebral body through said implant.
53. The push-in implant of claim 2, wherein said fusion promoting substances include at least one of bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.

54. The push-in implant of claim 2, wherein at least a portion of said implant is treated to promote bone ingrowth between said implant and said adjacent vertebral bodies.
55. The push-in implant of claim 2, in combination with a chemical substance to inhibit scar formation.
56. The push-in implant of claim 1, in combination with a fusion promoting substance.
57. The push-in implant of claim 56, wherein said fusion promoting substance includes at least one of bone, bone morphogenetic protein, hydroxyapatite, and genes coding for the production of bone.
58. The push-in implant of claim 1, wherein said blocker is pivotally attached to said proximate end, said blocker being configured to rotate towards said distal end.
59. The push-in implant of claim 1, in combination with a tool for expanding said implant.
60. The combination of claim 59, wherein said tool is one of a spreader and a distractor.
61. The push-in implant of claim 1, in combination with a tool for inserting said implant at least in part into the disc space.